

What is claimed is:

1. A system for managing a component-based system, comprising:

one or more application components, each of the components associated with a managed object representation comprising management logic of the component; and

a management core providing a managed object view of each managed object and allowing manipulation of management attributes of each managed object through at least one predetermined event policy

wherein when a predetermined event is reported in association with one of the components, an associated event policy of the at least one predetermined event policy is performed.

2. The system of claim 1 further comprising a management framework including the managed objects and supporting a variety of access mechanisms to the managed object.

3. The system of claim 2 further comprising at least one management application associated with the management framework performing management functions on the managed object wherein performance of one of the at least one predetermined event policy causes performance of a predetermined one of the at least one management application.

4. The system of claim 3 wherein the management attributes comprises component dependency and the at least one management application comprises a dependency management application, the dependency management application causing performance of a second management event policy on a second component dependent on a first component if a first management event policy is performed on the first component.

5. The system of claim 4 wherein the first management event policy comprises at least one of: a state change, a status change and an alarm report of the first component.

6. The system of claim 1 wherein the management attributes comprise at least one of: ability to provide service, usage of the component, degree to which the component is allowed to provide service, status and alarm attributes.

7. The system of claim 1 wherein the predetermined event is a fault and the associated event policy is a fault management event policy.

8. The system of claim 7 wherein the fault management event policy comprises current status maintenance.

9. The system of claim 1 wherein the predetermined event is an alarm and the associated event policy is an alarm reporting function.

10. The system of claim 1 wherein the management attributes comprise component dependency status.

11. The system of claim 1 further comprising at least one metric associated to the managed object wherein the at least one metric may be used to measure performance attributes of the component.

12. The system of claim 1 wherein the at least one predetermined event and the associated event policy may be edited.

13. The system of claim 1 wherein the at least one predetermined event and the associated event policy are configured into the managed object view of the component.

14. The system of claim 13 wherein the at least one predetermined event and the associated event policy are configured using a management editor tool.

15. The system of claim 1 wherein the management attributes comprise state and component dependency wherein a predetermined dependency event policy is performed on a first component based on the state of a second component upon which the first component is dependent..

16. The system of claim 15 wherein the dependency event policy comprises startup of the first component.

17. The system of claim 15 wherein the dependency event policy comprises shutdown of the first component.

18. The system of claim 15 wherein the dependency event policy comprises rerouting the dependency of the first component.

19. The system of claim 1 wherein the system is a telephony network.

20. The system of claim 1 wherein the system is a hybrid network.

21. A system for managing a component-based system, comprising:

one or more application components, each of the components associated with a managed object representation comprising management logic of the component; and

a management framework including the managed objects and a management event concentrator and allowing manipulation of management attributes of each managed object through at least one predetermined event policy.

22. The system of claim 21 wherein the managed object comprises a managed object interpreter and at least one management component, each management component including one of the management attributes.

23. The system of claim 21 wherein each managed object in the system sends management events to the management event concentrator.

24. The system of claim 23 further comprising at least one manager module coupled to the management event concentrator wherein each manager module monitors a specific management attribute for the system.

25. The system of claim 24 further comprising a management layer including the at least one manager module and at least one node specific management application programming interface ("API") wherein each manager module reports management information to a node specific element management system through the node specific API.

26. The system of claim 21 wherein each managed object and each management component comprise an identifier to allow the management system to access specific management components.

27. The system of claim 26 wherein the identifiers are mapped into a single tree structure.

28. A method of managing a component-based system comprising:

retrieving a record associated with a component;

establishing component events for managing the component;

selecting at least one event policy from a event policies storage area; and

associating at least one component event to each selected event policy to configure the component creating a network application, which may include additional configured components,

wherein the associated event policy is performed in the component based system if the at least one component event occurs.

29. The method of claim 28 further comprising storing the network application in an application model storage area.

30. The method of claim 28 wherein associating the component event to the selected event policy comprises associating the component event to the selected event policy using a management editor tool.

31. The method of claim 28 further comprising editing the at least one event.

32. The method of claim 28 further comprising editing the associated event policy.

33. The method of claim 28 further comprising associating the at least one component to a managed object representation in a management framework wherein the managed object representation is associated with the associated event policy.

34. The method of claim 28 further comprising associating the component with a management framework coupled to at least one management application performing a management functions wherein performance of the associated event policy causes performance of a predetermined one of the at least one management application.

35. The method of claim 28 further comprising manipulating management attributes of the component through the associated event policy wherein the management attributes comprise at least one of: ability to provide service, usage of the component, degree to which the component is allowed to provide service, status and alarm attributes.

36. The method of claim 28 wherein the event policy comprises one of: a state change, a status change and an alarm report.

37. A system for managing a component-based system comprising:

means for retrieving a record associated with a component;

means for establishing component events for managing the component;

means for selecting at least one event policy from a event policies storage area; and

means for associating at least one component event to each selected event policy to configure the component creating a network application, which may include additional configured components,

means for wherein the associated event policy is performed in the component based system if the at least one component event occurs.

38. A method of managing a component-based system, comprising:

a) receiving a report of an event from at least one component;

b) performing a management event policy associated with the event if the event matches an event stored in a managed object representation of the component; and

c) managing the at least one component using the result of the management event policy performed.

39. The method of claim 38 wherein performing the management event policy comprises manipulating management attributes of the component.

40. The method of claim 39 wherein manipulating the management attributes of the component comprises manipulating indicators of at least one of ability to provide service,

usage of the component, degree to which the component is allowed to provide service, status and alarm attributes.

41. The method of claim 38 wherein managing the at least one component comprises performing a management application if the result of the management event policy performed matches a predetermined management event policy result.

42. The method of claim 41 wherein the management event policy is a first management event policy and the component is a first component, and performing the management application comprises performing a second management event policy on a second component if the first management event policy is performed on the first component upon which the second component is dependent.

43. The method of claim 38 wherein the first management policy comprises performing at least one of a state change, a status change, an alarm report, a startup and a shutdown of the first component.

44. The method of claim 38 wherein the second management event policy comprises performing one of a state change, a status change, an alarm report, a startup, a shutdown and rerouting the dependency of the second component.

45. The method of claim 38 wherein managing the at least one component comprises storing the result of the component event policy performed in a management aggregator and performing a management event policy when the number of component event policy results stored in the management aggregator reaches a predetermined value.

46. The method of claim 38 wherein the event comprises a fault and performing the associated management event policy comprises performing a fault management event policy.

47. The method of claim 46 wherein performing a fault management event policy comprises updating a status of the component.

48. The method of claim 38 wherein the event comprises an alarm and performing the event policy comprises reporting the alarm.

49. The method of claim 38 further comprising measuring performance attributes of the component using the result of the management event policy.

50. A system for managing a component-based system, comprising:

means for receiving a report of an event from at least one component;

means for performing a management event policy associated with the event if the event matches an event stored in a managed object representation of the component; and

means for managing the at least one component using the result of the management event policy performed.

51. A method of managing a component based system comprising:

registering at least one manager module to monitor a management event for the network;

receiving an event report from a first component;

performing an event policy associated with the event if the event matches a predetermined event policy triggering event;

transmitting a result of the event policy performance to the at least one manager module if the result of the event policy performance matches the management event monitored by the at least one manager module; and

using the result of the event policy performance to manage at least the first component and a second component associated with the first component.

52. The method of claim 51 further comprising:

connecting to a first managed object associated with the first component and a second managed object associated with the second component;

associating at least one event policy with at least one event of each of the first component and the second component; and

starting up the first component through the first managed object and the second component through the second managed object.

53. The method of claim 51 wherein receiving the event report comprises receiving the event report from a context-specific logic through a context-free management logic of the component.

54. A system for managing a component based system comprising:

means for registering at least one manager module to monitor a management event for the network;

means for receiving an event report from a first component;

means for performing an event policy associated with the event if the event matches a predetermined event policy triggering event;

means for transmitting a result of the event policy performance to the at least one manager module if the result of the event policy performance matches the management event monitored by the at least one manager module; and

means for using the result of the event policy performance to manage at least the first component and a second component associated with the first component.

55. A computer readable medium, the computer readable medium storing computer readable code executable to perform a method for managing a component-based system comprising:

retrieving a record associated with a component;

establishing component events for managing the component;

selecting at least one event policy from a event policies storage area; and

associating at least one component event to each selected event policy to configure the component creating a network application, which may include additional configured components,



wherein the associated event policy is performed in the component based system if the at least one component event occurs.

56. A computer readable medium, the computer readable medium storing computer readable code executable to perform a method for managing a component-based system, including at least one telephony resource, comprising:

- a) receiving a report of an event from at least one component;
- b) performing a management event policy associated with the event if the event matches a stored event; and
- c) managing the at least one component using the result of the management event policy performed.

57. A computer readable medium, the computer readable medium storing computer readable code executable to perform a method for managing a component-based system comprising:

registering at least one manager module to monitor a management event for the network;

receiving an event report from a first component;

performing an event policy associated with the event if the event matches a predetermined event policy triggering event;

transmitting a result of the event policy performance to the at least one manager module if the result of the event policy performance matches the management event monitored by the at least one manager module; and

using the result of the event policy performance to manage at least the first component and a second component associated with the first component.